



## SEQUENCE LISTING

<110> Halkier, Torben  
Jespersen, Lene  
Jensen, Allan

<120> Novel Methods for the Identification of Ligand and Target Biomolecules

<130> 3631-104P

<140> US 09/744012

<141> 2001-01-19

<150> PCT/DK99/00408

<151> 1999-07-16

<150> DK PA1998 00956

<151> 1998-07-20

<150> US 60/094863

<151> 1998-07-23

<160> 43

<170> PatentIn version 3.0

<210> 1

<211> 451

<212> DNA

<213> Hordeum vulgare

<220>

<221> CDS

<222> (85)..(339)

<220>

<221> misc\_feature

<222> (88)..(336)

<223> mature peptide

<400> 1

cattaaactg atgacatgac agttcaagat ctacacagtca catcggcgat ctaatcagtc 60

tcacaggaag cgagcgtaac aagg atg agt tca gtg gag aag aag ccg gag 111  
Met Ser Ser Val Glu Lys Lys Pro Glu  
1 5

gga gtg aac acc ggt gct ggt gac cgt cac aac ctg aag aca gag tgg 159  
Gly Val Asn Thr Gly Ala Gly Asp Arg His Asn Leu Lys Thr Glu Trp  
10 15 20 25

cca gag ttg gtg ggg aaa tcg gtg gag gag gcc aag aag gtg att ctg 207  
Pro Glu Leu Val Gly Lys Ser Val Glu Glu Ala Lys Lys Val Ile Leu  
30 35 40

cag gac aag cca gag gcg caa atc ata gtt ctg ccg gtg ggk acm att 255

Gln Asp Lys Pro Glu Ala Gln Ile Ile Val Leu Pro Val Xaa Xaa Ile  
45 50 55

gtg acc atg gaa tat cgg atc gay cgc gtc cgc ctc ttt gtc gat aaa 303  
Val Thr Met Glu Tyr Arg Ile Asp Arg Val Arg Leu Phe Val Asp Lys  
60 65 70

ctc gac aac att gcc cag gtc ccc agg gtc ggc tag caagcttgag 349  
Leu Asp Asn Ile Ala Gln Val Pro Arg Val Gly  
75 80

agctagcctg ctgctggcgt gtatgtattg caqcttcacc atctctttctt ggcctatagca 409

agattgagat ttataaatca tatacaataa gatttgctgc gg 451

<210> 2  
<211> 34  
<212> PRT  
<213> Hordeum vulgare

<220>  
<221> misc\_feature  
<222> (38)..(336)  
<223> mature peptide

<400> 2

Met Ser Ser Val Glu Lys Lys Pro Glu Gly Val Asn Thr Gly Ala Gly  
1 5 10 15

Asp Arg His Asn Leu Lys Thr Glu Trp Pro Glu Leu Val Gly Lys Ser  
20 25 30

Val Glu Glu Ala Lys Lys Val Ile Leu Gln Asp Lys Pro Glu Ala Gln  
35 40 45

Ile Ile Val Leu Pro Val Xaa Xaa Ile Val Thr Met Glu Tyr Arg Ile  
50 55 60

Asp Arg Val Arg Leu Phe Val Asp Lys Leu Asp Asn Ile Ala Gln Val  
65 70 75 80

Pro Arg Val Gly

<210> 3  
<211> 27  
<212> DNA  
<213> artificial sequence

<220>

<223> primer derived from H. vulgare CI-2A protein

<400> 3

cggaatccat gaagacagtg gccagag

27

<210> 4

<211> 18

<212> DNA

<213> artificial sequence

<220>

<223> primer from H. vulgare CI-2A protein

<400> 4

cgcctgagtc agccgacct ggggacct

28

<210> 5

<211> 21

<212> DNA

<213> artificial sequence

<220>

<223> primer from pCMVbipep

<400> 5

ctgtatcttg cggtccogtg g

21

<210> 6

<211> 19

<212> DNA

<213> artificial sequence

<220>

<223> primer for pmCATIREShyg

<400> 6

acagctgccc ctgcagac

19

<210> 7

<211> 20

<212> DNA

<213> artificial sequence

<220>

<223> primer for pmCATIREShyg

<400> 7

cccactgctt actggcttat

20

<210> 8

<211> 19

<210> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> primer for pmCATIREShyg  
  
 <400> 8  
 ttgtgtgtgca cgtcatttg 19  
  
 <210> 9  
 <211> 10  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> primer for pmCATIFEShyg  
  
 <400> 9  
 ttgtgtatagg cgagtttggg 20  
  
 <210> 10  
 <211> 20  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> primer for pmCATIREShyg  
  
 <400> 10  
 gggttcgtgaa aggctccatt 20  
  
 <210> 11  
 <211> 22  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> primer for pmCATIREShyg  
  
 <400> 11  
 gaaatgttca caattagccc tg 22  
  
 <210> 12  
 <211> 60  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> primer for pCMVbipep/CI-2A  
  
 <400> 12  
 gaagatctat ggcggtccgca ccaaaaaaga agagaaagggt aggatccatg aagacagagt 60

<210> 13  
<211> 28  
<212> DNA  
<213> artificial sequence

<220>  
<223> primer for pCMVbipep/CI-2A

<400> 13  
cgttcgagtc agccgacct ggggacct 28

<210> 14  
<211> 30  
<212> DNA  
<213> artificial

<220>  
<223> primer for human immunoglobulin heavy chain signal peptide

<400> 14  
gagatctat ggactggatc tggcgcatcc 30

<210> 15  
<211> 38  
<212> DNA  
<213> artificial sequence

<220>  
<223> primer for human immunoglobulin heavy chain signal peptide

<400> 15  
gaggatccag aatgagcgcc ggtagcag 28

<210> 16  
<211> 21  
<212> DNA  
<213> artificial sequence

<220>  
<223> primer for pCMVbipepLS/CI-2A

<400> 16  
ctgtatctgg cggtccgtg g 21

<210> 17  
<211> 55  
<212> DNA  
<213> artificial sequence

<220>  
<223> primer for pCMVbipep/CI-2A

<400> 17  
ctaa ctaga ctacagctcg tcc ttgtagt cctcgaggcc gaccctgggg acctg 55

<210> 18  
<211> 18  
<212> DNA  
<213> artificial sequence

<220>  
<223> primer for pCMVbipep/CI-2A

<400> 1-  
c p p t a t c a t t g a a g a c a g a g t g g c c a g a g 29

<210> 19  
<211> 19  
<212> DNA  
<213> artificial sequence

<220>  
<223> primer for pCMVbipep/CI-2A

<400> 19  
c c g g c t t a t t c c a a g c g g c 20

<210> 20  
<211> 20  
<212> DNA  
<213> artificial sequence

<220>  
<223> primer for pCMVbipep/CI-2A

<400> 20  
c t g c c g g t g g g t a c a a t t g t g a c c a t g g 28

<210> 21  
<211> 21  
<212> DNA  
<213> artificial sequence

<220>  
<223> primer for pCMVbipep/CI-2A

<400> 21  
c t g t a t c t g g c g g c t c c g t g g 21

<210> 22  
<211> 21  
<212> DNA  
<213> artificial sequence

<210>  
<223> primer for pCMVbipep/CI-2A

<400> 22  
ctgatatctgg cggctccgtg g 21

<210> 23  
<211> 44  
<212> DNA  
<213> artificial sequence

<220>  
<223> primer for pCMVbipep/CI-2A

<400> 23  
ctgatttttc gacaaagagg cggacgggat cgatgcgata ttcc 44

<210> 24  
<211> 20  
<212> DNA  
<213> artificial sequence

<220>  
<223> primer for pCMVbipep/CI-2A

<400> 24  
cgggcttat tccaagcggc 20

<210> 25  
<211> 20  
<212> DNA  
<213> artificial sequence

<220>  
<223> primer for pCMVbipep/CI-2A

<400> 25  
cgggcttat tccaagcggc 20

<210> 26  
<211> 21  
<212> DNA  
<213> artificial sequence

<220>  
<223> primer for pCMVbipep/CI-2A

<400> 26  
ctgatatctgg cggctccgtg g 21

<210> 27  
<211> 54

<212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> primer for pCMVbipep/CI-2A  
  
 <400> 17  
 atttgctagc tgcacaacca gcaatggcac tgaagacaga gtggccagag ttgg 54  
  
 <210> 18  
 <211> 37  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> primer for pCMVbipep/CI-2A  
  
 <400> 18  
 attagaatgc ggccgcgcgcg accctgggga cctgggc 37  
  
 <210> 19  
 <211> 17  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> primer for pCMVbipep/CI-2A  
  
 <400> 19  
 cacacagaaa actatga 17  
  
 <210> 30  
 <211> 115  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> nucleotide sequence encoding a randomly composed amino acid sequence  
  
 <400> 30  
 ctgcgcggtgg gtacaattgt gctgcgctac atggaccgcg caatagtgat gaacgtgaac 60  
 attagcgcac gcaaactacg gattgatcgc gtcgcgctct ttgtcgacaa actcg 115  
  
 <210> 31  
 <211> 25  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> primer for SEQ ID NO: 30



<400> 31  
cgaattgtgc gacaaagagg cggac

25

<210> 32  
<211> 20  
<212> DNA  
<213> artificial sequence

<210>  
<213> primer for SEQ ID NO: 30

<400> 32  
ctatccgggtg ggtacaattg

20

<210> 33  
<211> 33  
<212> DNA  
<213> artificial sequence

<210>  
<213> degenerate oligonucleotide

<210>  
<211> misc\_feature  
<213> "n" can be any nucleotide (a, c, g or t)

<400> 33  
ctatccgggtg ggtagaattc nnnnknnknn knnknnknnk nnknnkcgga ttgatcgcg  
cgggtctttt gtcgacaaac tcg

60

83

<210> 34  
<211> 25  
<212> DNA  
<213> artificial sequence

<210>  
<213> primer for SEQ ID NO: 33

<400> 34  
cgagtttgtc gacaaagagg cggac

25

<210> 35  
<211> 12  
<212> PRT  
<213> artificial sequence

<210>  
<213> signal peptide present in pCMVbipepER/CI-2A

<400> 35

Met Ala Ala Pro Lys Lys Lys Arg Lys Val Gly Ser  
1 5 10

<210> 36  
<211> 21  
<212> PRT  
<213> artificial sequence

<220>  
<223> signal peptide for pCMVbipepNLS/CI-2A

<400> 36

Met Asp Trp Ile Trp Arg Ile Leu Phe Leu Val Gly Ala Ala Thr Gly  
1 5 10 15

Ala His Ser Ala Ser  
20

<210> 37  
<211> 8  
<212> PRT  
<213> artificial sequence

<220>  
<223> signal peptide for pCMVbipepSL/CI-2A

<400> 37

Leu Glu Asp Tyr Lys Asp Glu Leu  
1 5

<210> 38  
<211> 23  
<212> PRT  
<213> artificial sequence

<220>  
<223> fragment constituting random insert

<400> 38

Val Leu Arg Tyr Met Asp Arg Ala Ile Val Met Asn Val Asn Ile Ser  
1 5 10 15

Ala Arg Lys Leu Arg Ile Asp  
20

<210> 39  
<211> 5788  
<212> DNA  
<213> artificial

<220>  
<223> Hybrid circular plasmid

<400> 39

tcgcgcggttt cggatgatgac ggtgaaaaacc tctgacacat gcagctcccg gagacgggtca	60
cagcttgtct gtaagcggat gcggggagca gacaagcccg tcagggcgog tcagcgggtg	120
ttggcgggtg tcggggctgg cttaaactatg cggcatcaga gcagattgta ctgagagtgc	180
accatattgc gtgtgaaata ccgcacagat gogtaaggag aaaataccgc atcagggccc	240
attcgccatt caggctggg aactgttggg aagggcgatc ggtgcggggc tcttcgatat	300
tagcacagct ggggaaaagg ggtatgtctg caaggcgatt aagtgtggta acgcacgggt	360
tttccagta agcagcttgt aaaaagcgg caagtgcaatt ctccggaatt ggcacaccta	420
gagtcggtta cataacttac ggtaaatggc ccgcttggtt gacgcgcaa cgaacccgcg	480
ccattgagct caataatgac gtatgttccc atagtaacgc caatagggac tttccattga	540
cgtcaatggg tggagtaatt acggtaaaat gcccacttgg cagtacatca agtgtatcat	600
atgcacaagta cgcacccctat tgaagtcaat gaaggtaaat ggcgcgctg gcattatgcc	660
cagtacatga ccttatggga ctttcctaact tggcagtaca cctacgtatt agtcacgct	720
attaccatgg tgatgcggtt ttggcagtae atcaatgggc gtggatagcg gtttgactca	780
cggggatttc caagtctcca cccattgac gtcattggga gtttgttttg gcacaaaaat	840
caacgggaact ttccaaaatg tcgtaacaac tcgcgcccat tgacgcaaat gggcggtagg	900
cgtgtacggg gggaggtcta taaaaaggg aagaacccca cactcggcgc gccagtcctc	960
cgatagactg agtcgcgcgg gtaccctgtt atccaataaa gccttttgct gttgcacccg	1020
aatcgtggtc tcgctgatcc ttgggagggt ctctcagag tgattgactg cccagcctgg	1080
gggtctttca tttgggggct cgtccgggat ttggagaccc ccgcccagg accaccgacc	1140
caccgtcggg aggtaagctg gccagcgatc gttttgtctc cgtctctgtc tttgtcgtg	1200
tgtgtgtgtg tgccggcatc tactttttgc gcctgcgtct gattctgtac tagttagcta	1260
actagatctg tatctggcgg ctccgtggaa gaactgacga gttcgtattc ccgaccgcag	1320
ccctgggaga cgtctcagag gcacggggg ggggatccag agctcgagct ttgaaaaaca	1380
cgggcgcgcc atgtagtcta gaacgcgttg atcagttaac gaattogaag ggtcccaggc	1440
ctcggagatc tgggcccctg cggccgcccc ctaacgttac tggcgaagc cgcttggaat	1500
aaggccggtg tgcgtttgtc tatatgttat tttccaccat attgcgctct tttggcaatg	1560
tgagggcgcg gaaacctggc cctgtcttct tgacgagcat tctaggggt ctttccctc	1620
tcgcaaaagg aatgcaaggc ctgttgaaat tctgaaagga agcagttcct ctggaagctt	1680
cttgaagaca aacaacgtct gtacgcaccc tttgcaggca gcggaacccc ccacctggcg	1740

acaggtgoot	ctjcgcccaa	aagccacgtg	tataagatac	acctgcaaag	goggcacaac	1870
cccagtgcca	cgtgttgagt	tggatagttg	tggaaagagt	caaatggctc	tootcaagcg	1880
tattcaacaa	ggjgctgaag	gatgcocaga	aggtacccca	tgttatggga	totgatctgg	1900
ggootcggtg	cacatgcttt	acatgtgttt	agtccaggtt	aaaaaacgtc	tagggccccc	1980
gaaccacggg	gacgtjggtt	toctttgaaa	aacaogattg	cccgctgtgg	ccctgaacac	2040
cgagcgaccc	tgcagccaat	atgggacccg	ccattgaaa	agatggattg	caagccaggtt	2100
ctccggccgc	ctgggtggag	aggetattcg	gotatgaactg	ggcacaacag	acaatcggtt	2160
gotctgatgc	cccgctgttc	cgctgtccag	cgacggggcg	cccggttctt	cttgtcaaga	2220
ccgacctgtc	cggtgcocctg	aatgaactgc	aggaacagggc	agccgggcta	tctgtggctgg	2280
ccacgaacggg	cgttccttgc	gcagctgtgc	togaogttgt	caactgaagcg	ggaagggact	2340
ggctgctatt	ggjcgaaagt	ccggggccagg	atctcctgtc	atctcacctt	gctcctgcgc	2400
agaaagtatc	cctcatggct	gatgcacatgc	ggcgjctgca	taogcttgat	ccggctacct	2460
gcccattcga	ccacccaagcg	aaacatcgca	tccagccagc	acgtactcgg	atggaagccg	2520
gtctctgcga	tcaggatgat	ctggacgaag	agcatccagg	gtccgcgcga	gcgcgaactgt	2580
tccgcaggct	caaggccgcg	atgcocgaag	ggagaggatct	cgtcgtgacc	cctggcgatg	2640
cctgcttgcc	gaatatcatg	gtggaaaatg	gcgcgttttc	tggattcctc	gaactgtggcc	2700
ggctgggtgt	ggcggaocgc	tatcaggaca	tagcgttggc	tacccgtgat	attgctgaag	2760
agcttgggcg	cgaatgggct	gacccgttcc	tctgtcttta	cggtatcgcc	gctcccgatt	2820
cgcagcgcat	cgccttctat	cgccttcttg	acgagttctt	ctgaacttaag	acaatagaag	2880
attgtaaatc	acgtgaataa	aagattttat	tcagtttaca	gaaagagggg	ggaatgaaag	2940
accccttcct	aaggcttagc	cagctaaactg	cagtaacgcc	atcttgcaag	gcctgggaaa	3000
ataccagagc	tgatgttctc	agaaaaacaa	gaacaaggaa	gtacagagag	gctggaaagt	3060
acggggacta	gggcacaaac	ggatatctgt	ggtcaagcac	tagggccccc	gcccagggcc	3120
aagaacagat	ggtccccaga	aacagagagg	ctggaaaagta	ccgggactag	ggccaaaacg	3180
gatatctgtg	gtcaagcaact	agggcccccg	cccagggcca	agaacagatg	gtccccagaa	3240
atagctaaaa	caacaacagt	ttcaagagac	ccagaaaactg	tctcaagggtt	ccccagatga	3300
ccggggatca	accccaagcc	tcatttaaac	taaccaatca	gtccgcttct	cgttctctga	3360
cccgcgctta	ttgtgcacca	gctctataaa	aagggttaaga	acccacact	cggcgcgcga	3420

gtctctcgat agactgagtc gcccggttac cctgttatcc aataaagcct tttgctgttg	3480
catccgaatc gtgtgtctgc tgatccttgg gaggggtctcc tctctgtctg ctgcacctgc	3540
aggcatgcaa gcttggtgta atcatggtca tagctgttcc ctgtgtgaaa ttgttatccg	3600
ctcacaaatc cacacaacat acgagccgga agcataaagt gtaaagcctg ggggtgcctaa	3660
tgagtgagct aactcacatt aattgogttg cgtcactgc ccgttttcca gtggggaaaac	3720
ctgtctgtgc agctgcatta atgaatcggc caacgcgcgg ggagaggcgg tttgctatt	3780
gggagctctc ccgctctctc gccctctgac tctgtgagct aggtctgttc gctgagggc	3840
gggttatcag ctactcaaaa gggtgtaata cgtttatcca cagaatcagg ggataacgca	3900
ggaaagaaca tgtgagcaaa aggcacgcaa aaggccagga accgtaaaaa ggccgcgttg	3960
ctggcgtttt tcataggtc ccgccccctt gacgagcctc acaaaaatcg accctcaagt	4020
cagaggtggc gaaaccgac aggaactataa agataccagg cgtttccccc tggaaagctc	4080
ctcgtgcgct ctctgttcc gacctgcgc cttaccggat acctgtccgc ctttctccct	4140
tgggaagcg tggcgcttcc tcaatgctca cgtgttaggt atctcagttc ggtgtaggtc	4200
gttcgctcca agctgggctg tgtgcaagaa cccccgctc agcccgaccg ctgcgcctta	4260
tccggttaact atcgtcttga gtccaaaccg gtaagacacg acctatcgcc actggcagca	4320
gccactggta acaggattag cagagcgagg tatgtaggcg gtgctacaga gttcttgaag	4380
tgggtggcta actacggcta cactagaagg acagtatttg gtatctgcgc tctgctgaag	4440
ccagttacct tcggaaaaag agttggtagc tcttgatccg gcaaacaaac caccgctggc	4500
agcgggtggt ttttgtttg caagcagcag attacgcgca gaaaaaaagg atctcaagaa	4560
gaccttttga tcttttctac ggggtctgac gctcagtgga acgaaaactc acgttaaggg	4620
attttggtca tgagattatc aaaaaggatc ttcacctaga tctttttaa ttaaaaatga	4680
agttttaaat caatctaaag tatatatgag taaacttggt ctgacagtta ccaatgctta	4740
atcagtgagg cacctatctc agcgatctgt ctatttcggt catccatagt tgcctgactc	4800
cccgctgtgt agataactac gatacgggag ggcttaacct ctggccccag tgcctgaatg	4860
ataccgcgag acccagctc accggtcca gatttatcag caataaacca gccagccgga	4920
agggcgcgag gcagaagtgg tctgcaact ttatccgctt ccatccagtc tattaattgt	4980
tgcggggaag ctagagtaag tagttcgcca gttaatagtt tgccgaaagt tgttgccatt	5040
gtacacggca tctgggtgtc acgtcgtctg tttggtatgg cttcatcag ctccggttcc	5100
caacgatcaa ggcgagttac atgaccccc atgttgtgca aaaaagcggc tagctccttc	5160

ggctctccga tcgttgctag aaqtaagttg gcgcagtggt tatcactcat gggtatggca 5220  
 ccactgcata attctctttac tgctcatgcca tccgtaagat gcttttctgt gactgggtgag 5280  
 tactcaacca agtcattctg agaatagtggt atggggcgac cgagttgctc ttgcgcggcg 5340  
 tcaatccggg ataataccgc gccacatagc agaactttaa aagtgtctat cattggaaaa 5400  
 cgttcttggg ggcgaaaaact ctcaaggatc ttaacgctgt tgagatccag ttgatgtaa 5460  
 ccaatctgtg caccacaactg atcttcagca tcttttactt tcaccagcgt ttctgggtga 5520  
 gcaaaaacag gaaggcaaaa tgccgcacaaa aagggaataa gggcgacacg gaaatgttga 5580  
 atactcacc tcttcttttt tcaatattat tgaagcattt atcaggggta ttgtctcatg 5640  
 agcgatata tatttgaatg tatttagaaa aataaacaaa taggggttcc gcgcacattt 5700  
 ccccaaaaag tgcacactga cgtctaagaa accattatta tcatgacatt aacctataaa 5760  
 aataggcgta tcacgaggcc ctttcgtc 5788

<210> 40  
 <211> 48  
 <212> DNA  
 <213> artificial sequence

<220>  
 <223> primer for PUT 649

<400> 40  
 ggtcaggaat tctccggaat tggctagcct agagtcggtt acataact 48

<210> 41  
 <211> 63  
 <212> DNA  
 <213> artificial sequence

<220>  
 <223> primer for PUT 649

<400> 41  
 gaggaactggc gcgcgcagtg tgggggttctt acccttttta tagacctccc accgtacacg 60  
 cct 63

<210> 42  
 <211> 76  
 <212> DNA  
 <213> artificial sequence

<220>  
 <223> primer for pBiZeo-Neo

(400) 42  
agatctccga ggctgggac ccttegaatt cgttaactga tcaacgcgtt ctagactaca 60  
ggcgggcgc gtgttt 76

(210) 43  
(211) 44  
(212) DNA  
(213) artificial sequence

(222)  
(223) primer for pBiZeo-Neo

(400) 43  
gggggatcca gagctcgagc ttgaaaaac acgcggcgc catg 44